

Quality of clinical education – A three-year follow-up among undergraduate nursing students in Finland and Sweden

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The purpose of this study was to compare the experiences of a group of Swedish and two Finnish groups of student nurses ($n=86$) on the quality of clinical education over time. The data was collected using an instrument including four factors. In the comparison of the years 2009, 2010 and 2011/2012 ($n=86$), there were no statistically significant differences between years in the whole data. In year 2009 Swedish students ($n=41$) evaluated clinical preception and learning in clinical education lower than Finnish students ($n=45$). In the year 2010 Finnish students' evaluated clinical preception lower than Swedish students. In year 2011/2012 Swedish students evaluated learning objectives in clinical education lower than Finnish students. The follow-up group and the dropout group did not differ from each other regarding the background variables or reports on the quality of clinical education. (*Asia-Pacific Journal of Cooperative Education*, 2014, 15(4), 305-319)

Keywords: Clinical education, preceptorship, quality, student supervision

The significance of learning in clinical education is considerable within nursing education (Warne et al., 2010). It is well known that there are variations in student nurses' experiences of clinical education (e.g., Jonsén, Hilli, & Melender, 2012). Challenges exist for nursing teachers and preceptors in changing outdated and inappropriate approaches and in developing new practices that better meet the needs of student learning in clinical education (Saarikoski, Warne, Kaila, & Leino-Kilpi, 2009).

This research paper is based on a longitudinal follow-up study, which was part of an international research and development project named SuperNurse Botnia 2, on the quality of the nurse students' clinical education. According to Oxford Dictionaries (2014), 'quality' means 'the standard of something as measured against other things of a similar kind; the degree of excellence of something'. In this project, the concept of 'quality of clinical education' refers to such clinical education that offers the students as good learning experiences as possible, including how the students evaluated the clinical preception and how they self-evaluated what they had learned. Learning is understood, from the viewpoint of constructivist learning theory as an act of selecting new information and interpreting it based on one's own perceptions, expectations and aims, striving to understand new information grounded on one's existing knowledge. Knowledge is not transported to the person, but she/he constructs the knowledge on the basis of new information, always in some context and situation (von Wright, 1996). The goal of educational research is to generate knowledge that describes, predicts, improves, and explains processed and practices related to education. When conducting a quantitative study, numerical data is generated to

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represent the social environment. Questionnaires are used extensively in educational research to collect data that are not directly observable. These are, for example, experiences and opinions (Gall, Gall, & Borg, 2007).

The partners in the project are two Finnish universities of applied sciences, which will be referred to as "FIN1" and "FIN2" and one Swedish university, which will be referred to as "SWE". Cooperation between these institutions was judicious, because the Finnish partners are located on the eastern side and the Swedish partner on the western side of the Gulf of Bothnia. Within this area, all kinds of cooperation related to education and economic life, for example, has traditionally been strong and profitable. The ultimate goal of the project was to establish a common platform for nursing student clinical preception in both countries. This platform will assist student and teacher exchanges, for example, as well as the migration of nursing labor between these countries. The follow-up study served as a base for the platform: the topic of interest was to discover whether there are similarities or differences in the quality of clinical education evaluated by the students of these partners.

Lahtinen, Leino-Kilpi, and Salminen (2013) have newly analyzed nursing education in 45 member countries of the European Higher Education Area (EHEA). The duration of a full-time nursing education program varies from two to four years, 58% of the schools/universities have three years which includes 4,600 hours of combined theoretical and clinical training. Most of the countries (82%) offer higher education leading to a bachelor's degree, for example a Bachelor of Nursing degree. Masters and doctoral degrees in nursing are offered in 60% of the countries. Clinical education should consist of at least 2,300 hours training.

In Finland, nursing education covers 210 credits (three and a half years) and in Sweden, it covers 180 credits (three years). Finnish and Swedish students often have named preceptors throughout all of their clinical education periods, which is in line with the recommendations for clinical education in Finland (Heinonen, 2004), and in Sweden (Löfmark, Carlsson, & Wikblad, 2001).

In this follow-up study, the data was collected using a self-administered questionnaire named SECE (Students' Experiences of Clinical Education). The details of the follow-up study are presented in the materials and methods section. The instrument comprised four sections: Clinical Preception, Learning in Clinical Education, Learning Objectives in Clinical Education, and Reflection in Clinical Education. Previous literature on the topic is presented according to these factors.

LITERATURE REVIEW

Clinical Preception

Clinical preception has been defined in the literature in different ways. According to Budgen's and Gamroth's (2008) review "preceptorship involves assignment of a student to practice, for a defined period, with a clinician employed in the unit and experienced in the type of practice". In the review by Jokelainen, Turunen, Tossavainen, Jamokeeah, and Coco (2011), preceptorship is defined in a way that the preception of nursing students implies facilitating learning experiences through the creation of supportive learning environments, in order to activate the individual student's learning process.

It is important for a student nurse's learning that the clinical preceptor is visible and stimulating, and that the atmosphere in the clinical placement is permissive (Jonsén et al., 2012), welcoming (Courtney-Pratt, FitzGerald, Ford, Marsden, & Marlow, 2011) and committed to supporting students' learning (Courtney-Pratt et al., 2011; Kaihlanen, Lakanmaa, & Salminen, 2013). The preception should be based on pedagogical principles: the student should be offered different learning opportunities that are based on their learning outcomes (Lindahl, Dagborn, & Nilsson, 2009; Lindquist, Johansson, & Severinsson, 2011). During the learning process, the student should have responsibility and independence (Kaihlanen et al., 2013; Löfmark & Wikblad, 2001), feedback (Kaihlanen et al., 2013; Courtney-Pratt et al. 2011) and opportunities to practice different tasks (Courtney-Pratt et al., 2011; Löfmark & Wikblad, 2001).

A supportive yet challenging professional relationship between the student and the preceptor contributes to the student's professional development (Severinsson & Sand, 2010). A study by Melender, Sandvik, Salmu, Jonsén, and Hilli (2012) showed that the properties of the preceptors can differ considerably. Some preceptors had been skilful at perception, whereas some had not, and some had shown they felt secure at their role while others felt insecure. Differences were reported about how good a role model and how supportive the preceptor had been. Also views about whether the preceptor was "there" for the student or not, varied a great deal. Kristofferzon, Mårtensson, Mamhidir, and Löfmark (2012) found that the students perceived their clinical preceptors in a higher degree as supportive while clinical lecturers were perceived as more important as challengers for critical thinking, reflection and exchange of experiences between students. In the Warne et al. (2010) international study on comparisons of different clinical learning environments, the most satisfied students studied at a university college, and had at least a seven week clinical education period supported by individualized preceptorship relationships. More than half of all respondents had a successful preceptorship experience, where a student had one named preceptor, a good relationship with that person, and the students had the same named preceptor during the whole clinical education period. Heffernan, Heffernan, Brosnan, and Brown (2009) found that after a preceptor preparation, student nurses perceptions of the demonstration of the important characteristics of the preceptor were positive.

Studies on clinical preceptorship have quite extensively identified the elements of good preceptorship, whereas not so many studies have been conducted on how good the clinical preceptors have been when evaluated by the students. To gain a better understanding of it, we invited the students to evaluate their preceptors in this study.

Learning in Clinical Education

Preparing the student nurses properly for the clinical education and creating an appropriate learning environment are important for the student's learning (Severinsson & Sand, 2010). It is important that the student nurses have opportunities to handle theory in relation to practice during their clinical education (Lilja Anderson & Edberg, 2012). Chan (2013) emphasized the importance of learning critical thinking in nursing education in academic context, but found in her systematic review also that clinical preceptors can influence students' critical thinking by role modeling, facilitating, guiding and prioritizing. In this systematic review, Chan identified four components of critical thinking: questioning and investigating; analysis evaluation and inference; problem solving; and application of theory.

In Jonsén et al.'s (2012) study, some students had had an experience during their clinical education period where theoretical nursing and practice were somewhat connected, while some maintained that they were disconnected and confusing. Espeland and Indrehus (2003) found in their study that the student nurses were more satisfied with their own learning during their clinical education than during the theoretical studies. In a study by Al-Kandari, Vidal, and Thomas (2009), the students perceived psychomotor skills as the domain of lowest achievement. Some of the utilized clinical practice settings could not guarantee skill practice, implying the need for a more careful selection of clinical settings to meet learning objectives. Research evidence as to if the students have learned what they are supposed to learn in clinical education is quite limited and we aimed to fill in the gap in this study.

Learning Objectives in Clinical Education

Learning objectives form an important basis for the student's learning process (Lilja Andersson & Edberg, 2012; Lindahl et al., 2009; Lindquist et al., 2011; von Wright, 1996). They provide information about what the students are expected to learn (Harden 2007a) and they may also provide guidance on the level of mastery required by students at their stage of educational development (Harden 2007b). Henderson et al. (2010) concluded in their study that the quality of the professionals who guide learning has a major impact on students' achievement of learning outcomes. Therefore it is imperative to develop registered nurses' skills and abilities as they teach and role-model behaviors to students. The preceptors have been positive towards learning about the learning objectives of student nurses in a study by Raines (2012), as they had consistently stated that they wanted to know the expectations of the course and the faculty.

The importance of learning objectives has been shown in many studies, but there is limited research on how student nurses actually have met their learning objectives in clinical education. In a study by Löfmark, Thorkildsen, Råholm and Natvik (2012), student nurses were satisfied with their achievement of their learning objectives. In this study, our aim was to collect information about how the students had met their learning objectives through their clinical education in different years.

Reflection in Clinical Education

Reflection means intellectual and affective activities in which individuals engage to explore their experiences, in order to lead to a new understanding and appreciation (Boud, Keogh, & Walker, 1985). The constructivist learning theory emphasizes the importance for students to learn the skills of self-reflection and critical thinking, in order to be able to evaluate one's own understanding, to recognize one's own motivation and ways of acting, and to find the gaps in one's own knowledge and skills (von Wright, 1996). The importance of student nurses' reflection (Lilja Anderson & Edberg, 2012; Lindahl et al., 2009; Mann, Gordon, & MacLeod, 2009) and critical thinking (Lindahl et al., 2009) for students' learning has been shown in earlier research. In Haugan's, Sørensen's, and Hanssen's (2012) study, clinical reflection groups were found to be an important aid in helping students to become more knowledgeable, perceptive, reflecting and caring. Holmlund, Lindgren and Athlin (2010) found that when using clinical reflection among student nurses, the students developed over time from a self-centered focus to a profession-centered focus. The students were satisfied with being together in the preception group and gaining new understandings and insights.

Barker and Pittman (2010) presented ways to apply realistic techniques to assure that the preceptorship is successful in today's fast-paced practice climate. For example, they

presented a so called “One Minute Preceptor” model based on five questions for the student which allows the preceptor to understand student’s critical thinking pattern, This model was originally presented by Neher, Gordon, Meyer, and Stevens (1992) and communicates general rules of encounter with patients and provides for immediate feedback about what was good and what needed improvement.

Although it is well known that reflection on a regular basis is important, it is not always used as it should be. Preceptors interviewed by Hilli, Melender, and Jonsén (2011) did not arrange any reflection sessions for the students regularly. It depended on the students’ activity if any reflection took place during their clinical education or not. Student nurses interviewed by Jonsén et al. (2012) reported that in the best situation, reflection could be essential, interesting and necessary for learning, but there were also opposite views, the worst case including no possibilities to reflect on the work in the ward.

These two studies on how reflection is put into practice during student nurses’ clinical education were qualitative ones, and in the present study we aimed to have a look how at it from a quantitative perspective and to see if there were differences between the different years of study.

PURPOSE AND RESEARCH QUESTIONS

The purpose of this longitudinal study was to compare the experiences of one group of Swedish and two Finnish groups of student nurses on the quality of clinical education over time. The group, consisting of 86 students in total, evaluated their clinical education experiences after their first (2009), second (2010), and last (2011/2012) clinical education period. The evaluation focused on clinical preception, learning in clinical education, learning objectives in clinical education, and reflection in clinical education. The results were compared between three academic years and between countries. As it was noticed that there were many dropouts during the follow-up period, we also examined whether there were differences between the final follow-up group ($n=86$) and the dropout group ($n=53$) regarding background variables at the first year data collection. The research questions were:

1. Are there any differences between three academic years in reports on the quality of clinical education of a group of Swedish student nurses and a group of Finnish student nurses?
2. Are there any differences between a Swedish student nurse group and a Finnish student nurse group in their reports on the quality of clinical education?
3. Are there differences between the final follow-up group and the dropout group regarding background variables and reports on the quality of clinical education at the first year data collection?

METHODS AND MATERIALS

Sampling and Data Collection

The sample ($n=86$) consisted of three subgroups of student nurses: the first in a Swedish faculty (SWE) ($n=41$), the second in a Finnish faculty (FIN1, $n=34$) and the third in another Finnish faculty (FIN2, $n=11$). These student groups were convenient for the project’s purposes, taking account of the starting time for the project. All the students belonging to these three groups were eligible and invited to participate. In the comparison of the

subgroups, FIN1 and FIN2 were put together, because of the small sample size. The curricula of these two Finnish faculties are quite similar and both of them have been built on the basis of the central concepts on nursing science: human being, environment, health and nursing (Meleis, 1997). The base of these curricula also lies on the Finnish legislation (e.g., demands of evidence based practice, patient safety and quality of care), health politics, changes in the health care system, needs of the Finnish population and society and the challenges in future, for example the growing amount of elderly people and Finnish national diseases. They also take into account directives from the European Union. Moreover, learning general competencies with little specification in organizations and tasks is important (Eriksson, Merasto, Sipilä, & Korhonen, 2013). Clinical education is organized quite similarly by these faculties, and that is why the researchers estimated that it would be possible to combine the data of these faculties, in order to obtain a larger Finnish sample.

Initially, during the first year, 139 students participated in the study. There were, however, 53 dropouts. Some of these had totally dropped out from their nursing studies or changed the program they attended, and some others had not yet registered for the second year. Moreover, there were a few who did not return the questionnaire in spite of several reminders. The background variables of the participants are presented in Table 1 which also includes information about the dropout group which will be examined later.

Because there was a remarkably large number of dropouts, we also examined whether there were differences between the follow-up group ($n=86$) and the dropout group ($n=53$) regarding background variables and reports on the quality of clinical education.

TABLE 1: Comparison of the background variables of the follow-up group (FIN1 + FIN2 + SWE) ($n=86$) and the dropout group (FIN1 + FIN2 + SWE) ($n=53$) year 2009

Background variable frequency (f)/mean	Follow-up group (FIN1 + FIN2 + SWE) ($n=86$) year 2009	Dropout group (FIN1 + FIN2 + SWE) ($n=53$) year 2009	p^* in the comparisons
Sex (f)	Female: 76 Male: 10	Female: 44 Male: 9	ns
Age in years (mean)	21.9	22.5	ns
Country (f)	Finland: 45 Sweden: 41	Finland: 11 Sweden: 33	ns
Work experience before nurse education (f)	Yes: 68 No: 16	Yes: 40 No: 11	ns
Work-beside-studying (f)	Yes: 52 No: 31	Yes: 26 No: 22	ns

* Statistical significance: p -value < 0.05 (ns = non-significant)

Data was collected by the researchers for all years, about one week after the end of each clinical education periods, during a lesson included in the theoretical studies. Already during the clinical education period, the students were sent an invitation to participate in the study via email. This invitation letter included information about the study. The students

were informed about the study once more in the actual data collection occasion, both in written form and orally by the researchers. Completing the questionnaire took about 30-45 minutes. The points of the data collections, the students' clinical education placements, the students' learning outcomes and the lengths of the clinical education periods are presented in Table 2.

TABLE 2: Data collections at different phases and the contents of clinical education periods

The points of the data collections	Clinical education placements	Learning outcomes	Lengths of the clinical education periods
2009, after the students' first clinical practice	Acute care or elderly care	<ul style="list-style-type: none"> To be able to create a caring relationship with a patient To be able to understand the special characteristics of an individual patient To be able to identify the basic needs of the patient To be able to meet the patient's needs <p>Moreover, the students were supposed to take part in the pharmacotherapy under perception.</p>	SWE: 3 weeks FIN1: 10 weeks FIN2: 7 weeks
2010, after the students' second clinical practice	Different wards in central hospitals, or Primary care units, or Elderly care	<ul style="list-style-type: none"> To be able to encounter the patient and her/his family To be able to identify the patient's individual needs To be able to plan and conduct the nursing process in the patients' care To be able to monitor the patient To be able to conduct nursing interventions To be able to document and report orally <p>Moreover, the students were supposed to continuously reflect on ethical issues regarding the care.</p>	SWE: 3 weeks FIN1: 10 weeks FIN2: 7 weeks
2011 or 2012, after the students' last clinical practice	Different wards in central hospitals, or primary care units	<ul style="list-style-type: none"> To understand the role of professional nursing care in a multi-professional cooperation and to be able to work in a multi-professional group To be able to do encounter the patient and her/his family – also seriously ill and dying humans and their next of kin To be able to independently plan and conduct the whole nursing process in the patients' care To be able to make independent decisions To be able to think critically To be able to be reflective To be able to consider ethical and other philosophical issues in nursing To perceive the leadership of nursing 	SWE: 10 weeks FIN1: 10 weeks FIN2: 13 weeks

Instrument

In the data collection, a self-administered structured questionnaire named SECE (Students' Experiences of Clinical Education) was used. The instrument was developed for the purposes of this study by using parts of earlier tested instruments with the permission of the owners of these instruments and on the basis of a literature review. These earlier tested instruments were found from the Subject and Teaching Feedback Item Bank of the Centre for Learning and Teaching, University of Technology, Sydney, Australia, (n.d.). Out of these earlier tested instruments, the NCF questionnaire (Nursing Clinical Facilitators Questionnaire) has been tested by Espeland and Indrehus (2003) showing Cronbach alpha values from 0.41 to 0.94, and by Löfmark and colleagues (2012) showing Cronbach alpha values from 0.96 to 0.97. Other instruments found in the Item Bank were "Students' view of own learning and generic attributes" and "Course Integration and Organisation". There was no published information about the statistics of these two instruments, which is a limitation of this study.

Originally, the instrument was developed using the English language, and after that it was translated into Swedish. In the following phase, it was translated back into English by a native English-speaking translator, and finally, it was translated back into Swedish and into Finnish. The instrument consists of Likert-scale type questions with a 4-point scale (1 = totally other view, 4 = totally same view). Originally, the instrument consisted of 64 items. It was validated by carrying out an explorative factor analysis and by deleting items which received low loadings or which did not load properly on any factor. On the basis of this, 40 items remained in the instrument. These were included in four sum variables calculated from the factors. After the factor analysis, the sum variables showed good Cronbach alpha values as follows: Clinical Preception .913; Learning in Clinical Education .902; Learning Objectives in Clinical Education .827; Reflection in Clinical Education .709 (Tappen, 2011).

The Clinical Preception factor consisted of 16 original statements. Here, three examples of these are presented: the preceptor gave the student the opportunity to work independently; the preceptor provided enough support considering the student's level of knowledge; the preceptor provided the student with adequate feedback. The Learning in Clinical Education factor consisted of 16 original statements. These included, for example, the following three statements: the student developed her/his problem-solving ability; the student developed the skills needed in the nursing profession; the student has learned to use different theories and principles in practice. The Learning Objectives in Clinical Education factor comprised five original statements which included for example the three statements as follows: in general, the student was satisfied with the clinical education period; in the clinical education period the student became more confident to do technical and practical tasks; the expected learning results of the education were achieved during the clinical education period. The Reflection in Clinical Education factor included three original statements which were as follows: the student was encouraged to use his/her earlier experiences; the student was encouraged to reflect upon his/her attitudes and values; the student was encouraged to learn from his/her experiences.

The instrument was pilot tested, which enhanced the validity of the instrument (Tappen, 2011). The sample size ($n=86$) was relatively small, which is a limitation of this study, as well as the fact that the specificity of the results was reduced by a small Likert scale.

Ethical Considerations

The study was carried out in accordance with The Code of Ethics of the World Medical Association for experiments involving humans (World Medical Association, 2014). Permission to conduct the study was obtained from all relevant organizations, and permission to use parts of earlier instruments was obtained from the owners of those instruments. It was stressed in all the information for the students about the study that participation was voluntary and that confidentiality was assured. Moreover, the students were informed that the evaluation they would receive would not be influenced by whether or not they participated in this research. On the basis of this information, they gave their informed consent to voluntarily participate in the study. Because this was a follow-up study, the participants could not remain totally anonymous. In order to assure confidentiality the questionnaires were coded with numbers, and the data was processed entirely by using the codes.

Analysis of the Data

Statistical analyses were performed using SPSS for Windows, Release 21.0. To describe the data, the means of the sum variables were calculated for the whole group (FIN1, FIN2 and SWE) in 2009, in 2011, and 2011/2012, and in the Finnish group (FIN1 and FIN2) and in the Swedish group separately in 2009, 2010 and 2011/2012. To compare the years 2009 and 2010, 2010 and 2011/2012, and 2009 and 2011/2012 in the whole data, a t-test (Paired Samples Test) was used, and to compare Finnish and Swedish groups in 2009, 2010 and 2011/2012, a t-test (Independent Samples Test) was performed. When comparing the follow-up group and the dropout group regarding sex, country, work experience before nurse education and work-beside-studying as background variables, Chi Square Tests were used. When comparing these two groups regarding age, a t-test (Independent Samples Test) was used. When comparing these groups regarding their evaluations of clinical education, a t-test (Independent Samples Test) was used. A p-value <0.05 was considered as being statistically significant.

RESULTS

In order to answer Research Question 1, three comparisons were performed in the whole data: the comparison of the years 2009 and 2010, the comparison of the years 2010 and 2011/2012, and the comparison of the years 2009 and 2011/2012. These comparisons showed no statistically significant differences between years (Table 3).

In order to answer Research Question 2, the Finnish (FIN1 + FIN2) ($n=45$) and the Swedish data ($n=41$) were compared for all three years. In year 2009 Swedish students (mean 3.07) evaluated Clinical Preception lower than Finnish students (mean 3.37) ($p=0.015$), and in the same year Swedish students (mean 3.02) evaluated Learning in Clinical Education lower than Finnish students (mean 3.51) ($p=0.001$). In year 2010 Finnish students (mean 2.99) evaluated Clinical Preception lower than Swedish students (3.28) ($p=0.013$). In year 2011/2012 Swedish students (mean 3.22) evaluated Learning Objectives in Clinical Education lower than Finnish students (3.76) ($p=0.045$).

In order to answer Research Question 3, the background variables and reports on the quality of clinical education (the four sum variables in interest) of the follow-up group and the dropout group were compared in the data from year 2009. The analysis revealed that the

groups did not differ statistically from each other regarding the background variables or their evaluations of clinical education (Tables 1 and 4).

TABLE 3: Comparisons of evaluations between years in the whole follow-up group sample (FIN1 + FIN2 + SWE) ($n=86$)

Sum variables	2009 Mean (SD)*	2010 Mean (SD)*	2011 Mean (SD)*	p^{**} in the comparisons
Clinical Preception	3.23 (.578)	3.13 (.528)	3.21 (.580)	2009-2010: ns 2010-2011/2012: ns 2009-2011/2012: ns
Learning in Clinical Education	3.27 (.468)	3.30 (.387)	3.53 (2.461)	2009-2010: ns 2010-2011/2012: ns 2009-2011/2012: ns
Learning Objectives in Clinical Education	3.57 (.463)	3.45 (.482)	3.50 (1.262)	2009-2010: ns 2010-2011/2012: ns 2009-2011/2012: ns
Reflection in Clinical Education	2.90 (.701)	2.88 (.577)	2.92 (.650)	2009-2010: ns 2010-2011/2012: ns 2009-2011/2012: ns

* 1 = totally other view, 4 = totally same view

** Statistical significance: p -value < 0.05 (ns = non-significant)

TABLE 4: Comparison of evaluations by the follow-up group (FIN1 + FIN2 + SWE) ($n=86$) and the dropout group (FIN1 + FIN2 + SWE) ($n=53$) year 2009

Sum variables	Follow-up group (FIN1 + FIN2 + SWE) ($n=86$) Mean* (SD) year 2009	Dropout group (FIN1 + FIN2 + SWE) ($n=53$) Mean* (SD) year 2009	p^{**} in the comparisons
Clinical Preception	3.23 (.574)	3.31 (.481)	ns
Learning in Clinical Education	3.27 (.468)	3.22 (.468)	ns
Learning Objectives in Clinical Education	3.57 (.463)	3.57 (.491)	ns
Reflection in Clinical Education	2.90 (.702)	2.98 (.639)	ns

* 1 = totally other view, 4 = totally same view

** Statistical significance: p -value < 0.05 (ns = non-significant)

DISCUSSION

The first research question of this quantitative follow-up study was to find out if there are any differences between three academic years in reports on the quality of clinical education received by a group of Swedish student nurses and a group of Finnish student nurses. The participants reported a high quality of clinical education and no differences were found between their evaluations in different years in the whole follow-up group, which are very

positive results. However, qualitative studies by, for example, Hilli et al. (2011), Jonsén et al. (2012), and Melender et al. (2012) suggested that the quality of clinical education may differ concerning the different aspects of it. It is possible that quantitative and qualitative research approaches have different kinds of capacities to produce knowledge about the same phenomenon and both approaches are needed to capture the whole picture of it.

Although no differences were found between the years in the whole follow-up group, there were some differences between the two countries, which the second research question dealt with. In year 2009, Swedish students evaluated clinical preception lower than Finnish students, but the results were opposite in 2010, when Finnish students evaluated clinical preception lower than Swedish students. Overall, clinical preception was rated highly in both countries, suggesting good quality; likewise in the Warne et al. (2010) study more than half of all students responding had had a successful preceptorship experience. However, there were also opposing study findings: in studies by Holmlund et al. (2010) and Jonsén et al. (2012) at least some of the students had been dissatisfied with the quality of preception.

In the first year, 2009 Swedish students evaluated Learning in Clinical Education lower than Finnish students. However, this difference was found only at the beginning of the follow-up study and not in the latter phases. In Sweden, the students participating in this study had had a small amount of theoretical studies before their first clinical education and this might have affected the result. The mean scores for the Learning in Clinical Evaluation factor were high, likewise Espeland and Indrehus (2003) found the students were more satisfied with their learning during the clinical education compared to theoretical studies. In the Jonsén et al. (2012) study, the views of the students about their learning connect theory and practice varied considerably. Also, Al-Kandari et al. (2009) found that the students perceived psychomotor skills as the domain of lowest achievement during their clinical education. In this present study, the Learning in Clinical Education section of the instrument included a question asking if the student had developed the skills needed in the nursing profession and as the mean scores for this factor were high, it can be suggested that learning the skills have been more successful than was reported in the study by Al-Kandari's et al.

In the year 2011/2012, Swedish students evaluated the Learning Objectives in Clinical Education factor lower than Finnish students. However, the concern about reaching the learning outcomes was common in both countries. It could be assumed that at the final phase of their clinical education the students should be very experienced and effective as learners and know the strategies to study according to their learning objectives. What is also interesting is that at this final phase the length of the clinical education period in Sweden was much longer than before and this time it was as long as in FIN1. It can be suggested that the length of the period cannot be the only definitive aspect when considering the quality of clinical education, although it is important that student nurses have enough opportunities to learn in real clinical learning environments, as Severinsson and Sand (2010) and Lilja, Andersson and Edberg (2012) emphasize. An interesting finding by Warne et al. (2010) was that the most satisfied students had at least a seven week clinical education period, so the question on the significance of the length of the clinical education period could be investigated further. In total, the means for the learning objectives in Clinical Education factor were high; likewise Löfmark et al. (2012) have reported students having been satisfied with the achievement of their learning objectives. Overall, we can suggest that in most cases, the students had been offered different learning opportunities that have been based on their learning outcomes (Lindahl et al., 2009; Lindquist et al., 2011). However, it is important to

inform the preceptors about the learning objectives of the students every academic year in all clinical education placements, as the preceptors need this information and Raines's (2012) study findings confirm this.

There were no statistical differences between the two countries concerning how the students were supported to reflect. The mean for the Reflection in Clinical Education factor was consistently a little lower than the other sum variables for all years in the whole group and separately in both countries. The importance of reflective practice has been shown in many studies (Haugan et al., 2012; Holmlund et al., 2010; Lilja Anderson & Edberg, 2012; Lindahl et al., 2009; Mann et al., 2009) but in some clinical placements the students do not have as good opportunities to reflect and to develop reflection skills as they should have (Hilli et al., 2011; Jonsén et al., 2012). In a study by Kristofferzon et al. (2012) student nurses found that the lecturers were more important challengers for reflection as compared with preceptors. It remains unclear whether the significance of reflection is not acknowledged by clinical preceptors or whether they are lacking competence to provide support for students' reflection. Further education for preceptors might be needed around helping students reflect on what they do in the workplace. Another question is how well nursing teachers prepare and support their students to reflect upon their experiences. Severinsson and Sand (2010) say that the student nurse learning process is associated with how they are prepared for the clinical education and how the preceptor creates an appropriate learning environment. These both are worth development in the future.

Different kinds of development interventions in cooperation with the faculties and clinical education placements could possibly be useful, and the effectiveness of these interventions should be investigated. Budget and Gamroth (2008) have presented an overview of different clinical education models. In a development project, for example, two appropriate models could be looked at in practice and tested by a comparative study. Further education on preceptorship is an important part of these development acts, as, for example, Heffernan et al. (2009) reported, there are good results from such education. In today's fast-paced practice climate, also the "One Minute Preceptor" model (Barker & Pittman, 2010) could be worth testing.

The third research question was to find out if there are any differences between the final follow-up group and the dropout group regarding background variables and reports on the quality of clinical education at the first year data collection. The follow-up group and the dropout group did not differ from each other regarding the background variables or reports on the quality of clinical education. However, it is important to discuss why there were so many dropouts. It is natural that some students may not be reachable for some reason at the data collection time point. In order to solve this problem, the data collection procedures could be enhanced to be more effective, for example by using an electronic questionnaire instead of a hard copy version whose use demands physical attendance in the faculty by the student, as was the case in this study. The electronic questionnaire could be sent to the students via email as easily as the invitation for participation was sent in this study. Moreover, when sending reminders then the questionnaire could be attached again in the same message.

This study did not include any cultural, social or political perspectives. This was because this was the first comparative study between these two partners, in order to assist in starting to create a common platform for nursing student clinical preception in both countries and the topic of interest was to discover whether there are similarities or differences in the quality of

clinical education evaluated by the students in general. However, because the study was intended to assist student and teacher exchanges, for example, as well as the migration of nursing labor between these countries, the cultural, social and political perspectives should be addressed in future studies.

The limitation of this study was the relatively small sample size. The validity and the reliability of the SECE instrument have proven to be fairly good. However, the development of a high-quality instrument needs testing in large samples, for example, a sample of 300 or more respondents has been suggested (Polit & Beck, 2012). This is why it is suggested that the SECE instrument be tested in larger samples in the future.

CONCLUSION

This study is an example of cooperation between two countries on an area where there are common interests related to education and economic life. The ultimate goal of the project was to establish a common platform for nursing student clinical preception in both countries. The follow-up study, as well as the nursing curricula and clinical placement designs of both countries served as a base for the platform. According to the reports on the quality of clinical education by Swedish and Finnish student nurses there were no differences between three years in the whole data. However, there were some differences between countries regarding some factors, but the reasons for these differences remain unclear and they should be investigated further. Both qualitative and quantitative approaches should be used. Through quantitative studies it is possible to produce knowledge that can be generalized, whereas through qualitative studies it is possible to get a deeper insight on such topics for example why the reflection practices are not a part of everyday clinical preception practices and how these should be supported. Data collection procedures should be carefully designed and implemented, in order to avoid dropouts as effectively as possible. Further education needs to be organized for nursing teachers and clinical preceptors on methods for supporting students about reflecting on their own experiences, and the significance of reflection for the students. New models for clinical education need to be taken up and tested by a comparative study. These developmental acts should be conducted in close cooperation with the faculties and the staff of the clinical education placements.

ACKNOWLEDGEMENTS

The authors would like to thank The Botnia-Atlantica Programme (European Union), Regional Council of Ostrobothnia (Finland), County Administrative Board of Västerbotten (Sweden), Novia University of Applied Sciences, VAMK, University of Applied Sciences and Umeå University for funding this project. We also wish to thank Senior Lecturer Thomas Sabel from VAMK who has carried out the statistical analyses. Finally, special thanks to all the student nurses who participated in the study and thus made it possible.

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